

AMENDMENTS TO THE CLAIMS

This listing of the claims will replace all prior versions, and listings, of the claims in the application.

Listing of Claims:

Please amend the claims as follows without prejudice. No new matter has been added by way of these amendments.

1. (Currently amended) A heat-resistant concrete comprising aggregates embedded with a cementing matrix based on Portland cement and on mineral additives contributing silicon, calcium and aluminum oxides, so that the mineral composition of the matrix mixture lies in the ~~[xonotlite/wollastonite]-grossular-anorthite~~ xonotlite/wollastonite-grossular-anorthite triangle or in the grossular-anorthite-quartz triangle in the Si-Ca-Al phase diagram, so that the formation of anorthite is promoted when the set concrete is exposed to temperatures between 250°C and 1200°C.
2. (Currently amended) The concrete of claim 1, wherein the mineral composition of the matrix mixture lies in the area overlapping both the ~~[xonotlite/wollastonite]-grossular-anorthite~~ xonotlite/wollastonite-grossular-anorthite triangle and the grossular-anorthite-quartz triangle in the Si-Ca-Al phase diagram.
3. (Previously presented) The concrete of claim 1, wherein the aggregates are heat-resistant.
4. (Previously presented) The concrete of claim 1, wherein the mineral additives further contribute iron and/or magnesium.
5. (Original) The concrete according to claim 4, wherein the cumulative amount of iron oxides and of magnesium oxides is between 1 and to 5% of the total weight of the mineral composition.

6. (Previously presented) The concrete of claim 1 wherein all solids constituting the cementing matrix are provided in at least three distinct particle size fractions in volume ratio such that the packing volume fraction of the solids is optimized.
7. (Previously presented) The concrete of claim 1, wherein at least part of the mineral additives is added under the form of alumino-silicate hollow spheres to favor escape of vapor pressure when the concrete is submitted at high temperature.
8. (Previously presented) The concrete of claim 2, wherein the aggregates are heat-resistant.
9. (Previously presented) The concrete of claim 2, wherein the mineral additives further contribute iron and/or magnesium.
10. (Previously presented) The concrete of claim 3, wherein the mineral additives further contribute iron and/or magnesium.
11. (Previously presented) The concrete of claim 9, wherein the cumulative amount of iron oxides and of magnesium oxides is between 1 and to 5% of the total weight of the mineral composition.
12. (Previously presented) The concrete of claim 2 wherein all solids constituting the cementing matrix are provided in at least three distinct particle size fractions in volume ratio such that the packing volume fraction of the solids is optimized.
13. (Previously presented) The concrete of claim 3 wherein all solids constituting the cementing matrix are provided in at least three distinct particle size fractions in volume ratio such that the packing volume fraction of the solids is optimized.
14. (Previously presented) The concrete of claim 4 wherein all solids constituting the cementing matrix are provided in at least three distinct particle size fractions in volume ratio such that the packing volume fraction of the solids is optimized.

15. (Previously presented) The concrete of claim 5 wherein all solids constituting the cementing matrix are provided in at least three distinct particle size fractions in volume ratio such that the packing volume fraction of the solids is optimized.
16. (Previously presented) The concrete of claim 2, wherein at least part of the mineral additives is added under the form of alumino-silicate hollow spheres to favor escape of vapor pressure when the concrete is submitted at high temperature.
17. (Previously presented) The concrete of claim 3, wherein at least part of the mineral additives is added under the form of alumino-silicate hollow spheres to favor escape of vapor pressure when the concrete is submitted at high temperature.
18. (Previously presented) The concrete of claim 4, wherein at least part of the mineral additives is added under the form of alumino-silicate hollow spheres to favor escape of vapor pressure when the concrete is submitted at high temperature.
19. (Previously presented) The concrete of claim 5, wherein at least part of the mineral additives is added under the form of alumino-silicate hollow spheres to favor escape of vapor pressure when the concrete is submitted at high temperature.